

Abstract

Disclosed a nitride semiconductor LED including: a substrate; a GaN-based buffer layer formed on the substrate; $\text{Al}_y\text{Ga}_{1-y}\text{N}/\text{GaN}$ short period superlattice (SPS) layers formed on the GaN-based buffer layer in a sandwich structure of upper and lower parts having an undoped GaN layer or an indium-doped GaN layer interposed therebetween (Here, $0 \leq y \leq 1$); a first electrode layer of an n-GaN layer formed on the upper $\text{Al}_y\text{Ga}_{1-y}\text{N}/\text{GaN}$ SPS layer; an active layer formed on the first electrode layer; and a second electrode layer of a p-GaN layer formed on the active layer.